

REMARKS

I. Status of the Claims

Applicants thank Examiner for withdrawing the 35 U.S.C. 112 rejection of claims 2, 4, 6, 8, 10 and 11, as well as objections of claims 1, 3 and 4, set forth in the Office Action mailed on Feb, 28, 2006. Claims 1-16 are pending in this application. Claim 1 is amended to more distinctly point out and claim what Applicants regard as the invention. Support for the amendment can be found in the originally-filed specification. Specifically, support for the amendments can be found on pages 6-7, in the embodiments described on pages 8-10, and in the claims set forth on pages 12-14. Accordingly, no new matter has been added.

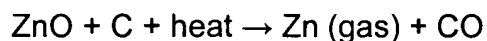
Claims 12-16 remain withdrawn pursuant to the Restriction Requirement dated January 19, 2006. Applicants request rejoinder of claims 12-16 if claims 1-11 are found allowable.

II. Claim Rejection

Examiner rejects claims 1-11 under 35 U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly set forth any process step for making the ZnO nanostructures. Applicants have amended claim 1 to particularly point out and distinctly set forth process steps for making ZnO nanostructures.

The Examiner further rejects claims 1-11 under 35 U.S.C. 102(b) as being anticipated by the Huang reference. (Huang et al., *Advance Materials*, Vo. 13, pg.113, 2001). The Huang reference discloses a method of making ZnO nanowires using pure

argon gas as purge gas. The current invention, on the other hand, uses a mixture of oxygen and argon gas in the fabrication of ZnO nanostructures. The Examiner suggests that using different purge gases simply results in “a difference in making the Zn gas”. Applicants respectfully disagree. Both the Huang reference and the current invention use carbothermal reduction of ZnO powder by graphite to generate Zn gas:



No oxygen source is needed in generating Zn gas. The Huang reference suggests that the source of oxygen in the final ZnO nanowire is from the small amount of CO generated in the ZnO reduction and residual water in the environment. (Huang et al, *Advance Materials*, Vo. 13, pg. 115, 2001) In the current invention, oxygen gas equals to 1-20 vol% of the argon gas is deliberately mixed in with the argon gas to form a gas mixture. It therefore creates a reaction environment distinct from that described in the Huang reference and may have led to changes in the mechanism of the formation of the ZnO nanostructures.

Therefore, using a mixture of oxygen and argon is not a limitation directed to making the Zn gas, per se, it is a limitation that further limits the claimed use of the Zn gas to make the claimed ZnO nanostructures. Such a limitation is absent from the Huang reference. Accordingly, for at least the aforementioned reasons, Applicants respectfully request withdrawal of this rejection.

III. Conclusion

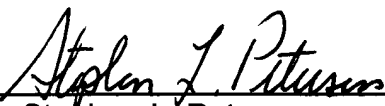
In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: September 12, 2006

By: 
Stephen L. Peterson
Reg. No. 26,325